

BookletChart™

Gulf of the Farallones

NOAA Chart 18645

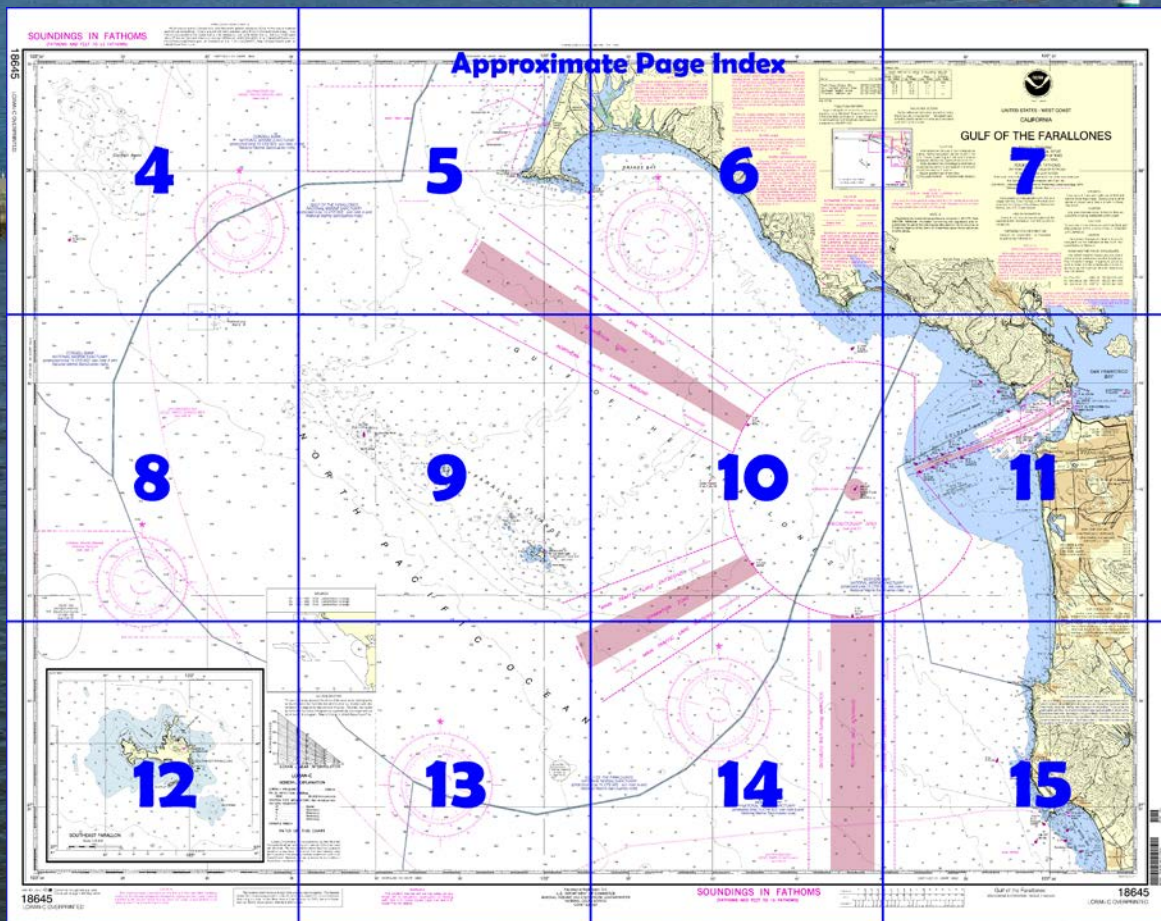


A reduced-scale NOAA nautical chart for small boaters

When possible, use the full-size NOAA chart for navigation.



- Complete, reduced-scale nautical chart
- Print at home for free
- Convenient size
- Up-to-date with Notices to Mariners
- Compiled by NOAA's Office of Coast Survey, the nation's chartmaker



**Published by the
National Oceanic and Atmospheric Administration
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888-990-NOAA**

What are Nautical Charts?

Nautical charts are a fundamental tool of marine navigation. They show water depths, obstructions, buoys, other aids to navigation, and much more. The information is shown in a way that promotes safe and efficient navigation. Chart carriage is mandatory on the commercial ships that carry America's commerce. They are also used on every Navy and Coast Guard ship, fishing and passenger vessels, and are widely carried by recreational boaters.

What is a BookletChart™?

This BookletChart is made to help recreational boaters locate themselves on the water. It has been reduced in scale for convenience, but otherwise contains all the information of the full-scale nautical chart. The bar scales have also been reduced, and are accurate when used to measure distances in this BookletChart. See the Note at the bottom of page 5 for the reduction in scale applied to this chart.

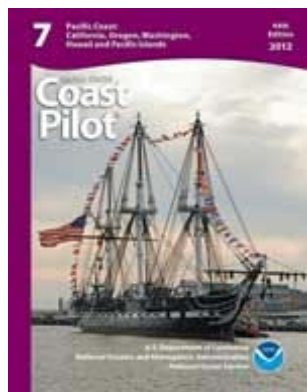
Whenever possible, use the official, full scale NOAA nautical chart for navigation. Nautical chart sales agents are listed on the Internet at <http://www.NauticalCharts.NOAA.gov>.

This BookletChart does NOT fulfill chart carriage requirements for regulated commercial vessels under Titles 33 and 44 of the Code of Federal Regulations.

Notice to Mariners Correction Status

This BookletChart has been updated for chart corrections published in the U.S. Coast Guard Local Notice to Mariners, the National Geospatial Intelligence Agency Weekly Notice to Mariners, and, where applicable, the Canadian Coast Guard Notice to Mariners. Additional chart corrections have been made by NOAA in advance of their publication in a Notice to Mariners. The last Notices to Mariners applied to this chart are listed in the Note at the bottom of page 7. Coast Pilot excerpts are not being corrected.

For latest Coast Pilot excerpt visit the Office of Coast Survey website at <http://www.nauticalcharts.noaa.gov/nsd/searchbychart.php?chart=18645>.



(Selected Excerpts from Coast Pilot)

The entrance to San Francisco Bay is through **Gulf of the Farallones** and the narrow Golden Gate.

The **Gulf of the Farallones National Marine Sanctuary** encompasses the waters off Bodega Head and Point Reyes, and the waters surrounding Farallon Islands. The sanctuary includes Bodega Bay but not Bodega Harbor. Recreational use of the area is encouraged. (See **15 CFR 922**, chapter 2, for limits and regulations.)

Farallon Islands, 23 miles W of San

Francisco Bay entrance, are rocky islets extending NW for 7 miles.

Southeast Farallon, the largest of the group, actually consists of two islands separated by a narrow impassable gorge. The larger E island is pyramidal in shape and 350 feet high; a small-boat landing is on the S side. **Farallon Light** (37°41'57"N., 123°00'07"W.), 358 feet above water, is shown from a white conical tower on the highest peak of the island.

Hurst Shoal, 0.6 mile SE of Farallon Light, is covered 22 feet and breaks only in heavy weather.

Middle Farallon, 2.3 miles NW of the light, is a 20-foot single black rock 50 yards in diameter; several rocks covered 5 to 7 fathoms are within 0.7 mile S and SW of it.

North Farallon, 6.5 miles NW of Farallon Light, consists of two clusters of bare precipitous islets and rocks from 91 to 155 feet high, 0.9 mile in extent, and 0.3 mile wide; submerged rocks surround them.

Fanny Shoal, 9.8 miles NW of Farallon Light and 14 miles SW of Point Reyes, is 2 miles in extent and covered 2 to 30 fathoms. **Noonday Rock**, covered 13 feet, rises abruptly from 20 fathoms and is the shallowest point of the shoal; it is the principal danger in the N approach to San Francisco Bay. A lighted bell buoy is about 0.7 mile W of the rock.

Noonday Rock derives its name from the clipper ship that struck it in 1862 and sank within an hour, in 40 fathoms.

Cordell Bank, 27 miles NW of Farallon Light and 20 miles W of Point Reyes, is about 6 miles long and 3 miles wide; the bank is covered 20 to 40 fathoms, but depths increase rapidly outside it.

The **Cordell Bank National Marine Sanctuary** has been established in the area of Cordell Bank and its surrounding waters. (See **15 CFR 922**, chapter 2, for limits and regulations.)

Warning.—Very dangerous conditions develop over San Francisco Bar whenever large swells, generated by storms far out at sea, reach the coast. A natural condition called shoaling causes the large swells to be amplified and increase in height when they move over the shallow water shoals. This piling up of the water over the shoals is worsened during times when the tidal current is flowing out (ebbing) through the Golden Gate. Outbound tidal current is strongest about 4 hours after high water at the Golden Gate Bridge and attains a velocity in excess of 6 knots at times. The incoming large swells are met by outbound tidal current causing very rough and dangerous conditions over the bar. Steep waves to 20 or 25 feet have been reported in the area. Mariners should exercise extreme caution as the bar conditions may change considerably in a relatively short period of time.

The most dangerous part of the San Francisco Bar is considered to be Fourfathom Bank. Bonita Channel, between the shoal and the Marin coast, can also become very dangerous during large swell conditions. The safest part of the bar is the Main Ship Channel through the center of the bar. But even that area can be extremely dangerous when the tidal current is ebbing.

Caution.—Vessels departing San Francisco Bay through Bonita Channel on the ebb current must use extreme caution when crossing the tide rip off Point Bonita. When the bow passes the rip the stern is thrown to port and, unless promptly met, the vessel will head straight for the rocks off the point. Vessels favoring Potatopatch Shoal too closely have reported a set toward it.

Bonita Channel should not be used by large vessels. Strangers wishing to cross the bar in thick weather should either wait for clearing or take a pilot. Fog is prevalent in the Golden Gate; radar is a great aid here.

U.S. Coast Guard Rescue Coordination Center 24 hour Regional Contact for Emergencies

RCC Alameda	Commander	
	11 th CG District	(510) 437-3700
	Alameda, CA	

Table of Selected Chart Notes

Scale 1:20,000

NOAA WEATHER RADIO BROADCASTS

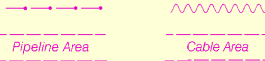
The NOAA Weather Radio stations listed below provide continuous weather broadcasts. The reception range is typically 20 to 40 nautical miles from the antenna site, but can be as much as 100 nautical miles for stations at high elevations.

Mt. Pise, CA	KHB-49	162.400 MHz
Mt. Umunhum, CA	KEC-49	162.550 MHz
Mt. Umunhum, CA	WWF-64	162.450 MHz

CAUTION

SUBMARINE PIPELINES AND CABLES

Charted submarine pipelines and submarine cables and submarine pipeline and cable areas are shown as:



Additional uncharted submarine pipelines and submarine cables may exist within the area of this chart. Not all submarine pipelines and submarine cables are required to be buried, and those that were originally buried may have become exposed. Mariners should use extreme caution when operating vessels in depths of water comparable to their draft in areas where pipelines and cables may exist, and when anchoring, dragging, or trawling.

Covered wells may be marked by lighted or unlighted buoys.

HEIGHTS

Elevations of rocks and lights are in feet and refer to Mean High Water. Contour and summit elevation values are in feet and refer to Mean Sea Level.

HORIZONTAL DATUM

The horizontal reference datum of this chart is North American Datum of 1983 (NAD 83), which for charting purposes is considered equivalent to the World Geodetic System 1984 (WGS 84). Geographic positions referred to the North American Datum of 1927 must be corrected an average of 0.254' southward and 3.924' westward to agree with this chart.

For Symbols and Abbreviations see Chart No. 1

CAUTION

Limitations on the use of radio signals as aids to marine navigation can be found in the U.S. Coast Guard Light Lists and National Geospatial-Intelligence Agency Publication 117.

Radio direction-finder bearings to commercial broadcasting stations are subject to error and should be used with caution.

Station positions are shown thus:

○ (Accurate location) ○ (Approximate location)

AIDS TO NAVIGATION

Consult U.S. Coast Guard Light List for supplemental information concerning aids to navigation.

CAUTION

Improved channels shown by broken lines are subject to shoaling, particularly at the edges.

AUTHORITIES

Hydrography and topography by the National Ocean Service, Coast Survey, with additional data from the Corps of Engineers, Geological Survey, and U.S. Coast Guard.

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

Mercator Projection
Scale 1:100,000 at Lat. 37°46'
North American Datum of 1983
(World Geodetic System 1984)

SOUNDINGS IN FATHOMS
(FATHOMS AND FEET TO ELEVEN FATHOMS)

CAUTION

Temporary changes or defects in aids to navigation are not indicated on this chart. See Local Notice to Mariners.

POLLUTION REPORTS

Report all spills of oil and hazardous substances to the National Response Center via 1-800-424-8802 (toll free), or to the nearest U.S. Coast Guard facility if telephone communication is impossible (33 CFR 153).

NOTE C

TRAFFIC SEPARATION SCHEME

One-way traffic lanes overprinted on this chart are RECOMMENDED for use by all vessels traveling between the points involved. They have been designed to aid in the prevention of collisions at the approaches to San Francisco Bay but are not intended in any way to supersede or alter the applicable Rules of the Road. Separation zones are intended to separate inbound and outbound traffic and to be free of ship traffic. Separation zones should not be used except for crossing purposes. Mariners are requested to stay outside the circular separation zone centered on San Francisco Approach Lighted Horn Bouy S.F.. When crossing traffic lanes and separation zones use extreme caution.

CAUTION

Do not rely on radiobeacon bearings from any ship position within one-half mile of GOLDEN GATE BRIDGE.

NOTE D

PRECAUTIONARY AREA

Traffic within the Precautionary Area may consist of vessels making the transition between the Main Ship Channel and one of the established traffic lanes. Mariners are advised to exercise extreme caution when navigating within this area. The normal cruising area of the pilot vessel is indicated "PILOT AREA." When passing Traffic Lane Lighted Buoys "S", "W", or "N", inbound vessels should contact the pilot boat on channel 13 for boarding instructions.

NOTE G

MAIN SHIP CHANNEL
SAN FRANCISCO ENTRANCE
Depths entering from seaward,
surveys to AUG 2012

Left outside quarter	52.0 ft.
Left inside quarter	54.0 ft.
Right inside quarter	55.0 ft.
Right outside quarter	54.0 ft.

WARNING

The prudent mariner will not rely solely on any single aid to navigation, particularly on floating aids. See U.S. Coast Guard Light List and U.S. Coast Pilot for details.

NOTE H

The U.S. Coast Guard operates a mandatory Vessel Traffic Services (VTS) system in the San Francisco Bay and surrounding areas. Vessel operating procedures and designated radiotelephone frequencies are published in 33 CFR 161, the U.S. Coast Pilot, and/or the VTS User's Manual. Mariners should consult these sources for applicable rules and reporting requirements. Although mandatory VTS participation is limited to the navigable waters of the United States, certain vessels are encouraged or may be required, as a condition of port entry, to report beyond this area to facilitate advance vessel traffic management within the VTS area.

The U.S. Coast Guard operates a Vessel Traffic Service Offshore Vessel Movement Reporting System covering the seaward approaches to San Francisco Bay. Vessels are requested to monitor VTSSF on Channel 12 at 15 and 45 minutes past each hour for broadcast reports of known shipping traffic in the area.

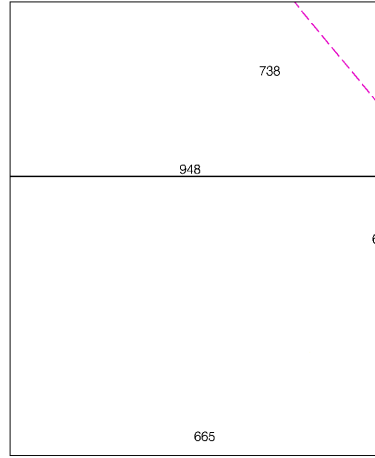
NOTE A

Navigation regulations are published in Chapter 2, U.S. Coast Pilot 7. Additions or revisions to Chapter 2 are published in the Notice to Mariners. Information concerning the regulations may be obtained at the Office of the Commander, 11th Coast Guard District in Alameda, California or at the Office of the District Engineer, Corps of Engineers in San Francisco, California.

Refer to charted regulation section numbers.

TRAFFIC LANES

Traffic lanes are intended for use by vessels 1600 gross tons and over; arrows indicate the approximate direction of traffic flow within each lane. The provisions of Inland Navigation Rule 9 apply to all vessels navigating in the traffic lanes.



NOTE S

Regulations for Ocean Dumping Sites are contained in 40 CFR, Parts 226 and 227. Additional information concerning the regulations and requirements for use may be obtained from the Environmental Protection Agency (EPA), Office of Ocean Dumping Regulation, Washington, D.C. Coast Pilots appendix for addresses of EPA offices. Dumping subsequent to the survey dates may have reduced the depths shown.

NOTE F

CHEMICAL MUNITIONS DUMPING AREA - RESTRICTION

Site was formerly used or designated for U.S. chemical munitions dumping. Such use has been discontinued. Designation of such area in no way constitutes authority for dumping.

SOURCE DIAGRAM

The outlined areas represent the limits of the most recent hydrographic survey information that has been evaluated for charting. Surveys have been banded in this diagram by date and type of survey. Channels maintained by the U.S. Army Corps of Engineers are periodically resurveyed and are not shown on this diagram. Refer to Chapter 1, United States Coast Pilot.

NATIONAL MARINE SANCTUARIES NOTE

National Marine Sanctuaries are protected areas, administered by NOAA, which contain abundant and diverse natural resources such as marine mammals, seabirds, fishes, and tidepool invertebrates. These areas are particularly sensitive to environmental damage such as spills of oil and other hazardous materials, discharges, and groundings. Exercise particular caution and follow applicable Sanctuary regulations when transiting these areas to avoid environmental impacts. A full description of Sanctuary regulations may be found in 15 CFR Part 922 and in Coast Pilot.

VESSEL TRANSITING

The U.S. Coast Guard and the Pacific States/British Columbia Oil Spill Task Force endorse a system of voluntary measures and minimum distances from shore for certain commercial vessels transiting along the coast anywhere between Cook Inlet, Alaska to San Diego, California. See U.S. Coast Pilot 7, Chapter 3 for details.

COLREGS: International Regulations for Preventing Collisions at Sea, 1972
Demarcation lines are shown thus: - - - - -

NOTE X

Within the 12-nautical mile Territorial Sea, established by Presidential Proclamation, some Federal laws apply. The Three Nautical Mile Line, previously identified as the outer limit of the territorial sea, is retained as it continues to depict the jurisdictional limit of the other laws. The 9-nautical mile Natural Resource Boundary off the Gulf coast of Florida, Texas, and Puerto Rico, and the Three Nautical Mile Line elsewhere remain in most cases the inner limit of Federal fisheries jurisdiction and the outer limit of the jurisdiction of the states. The 24-nautical mile Contiguous Zone and the 200-nautical mile Exclusive Economic Zone were established by Presidential Proclamation. Unless fixed by treaty or the U.S. Supreme Court, these maritime limits are subject to modification.

TIDAL INFORMATION

PLACE		Height referred to datum of soundings (MLLW)		
NAME	(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water
		feet	feet	feet
Princeton, Half Moon Bay	(37°30'N/122°29'W)	5.5	4.9	1.1
Southeast Farallon Island	(37°42'N/123°00'W)	5.6	4.9	1.1
Point Reyes, Drakes Bay	(38°00'N/122°59'W)	5.8	5.1	1.2
San Francisco (Golden Gate)	(37°48'N/122°28'W)	5.8	5.1	1.1

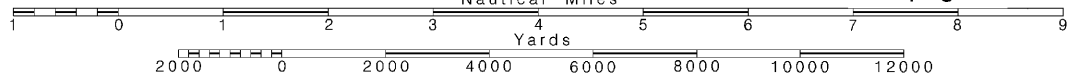
Dashes (- - -) located in datum columns indicate unavailable datum values for a tide station. Real-time water levels, tide predictions, and tidal current predictions are available on the internet from <http://tidesandcurrents.noaa.gov>. (Feb 2012)

SOUNDINGS IN FATHOMS

[illegible]

Joins page 8

See Note on page 5.



Note: Chart grid lines are aligned with true north.

4

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05' CONTINUED ON CHART 18643

123°

NAVY TEST AREA

PT. REYES LIGHT

POINT REYES

THREE NAUTICAL MILE LINE (see note V)

NORTHERN TRAFFIC SEPARATION ZONE

NORTHERN TRAFFIC

SEPARATION ZONE

Joins page 9

Joins page 6

05' CONTINUED ON CHART 18643

123°

NAVY TEST AREA

PT. REYES LIGHT

POINT REYES

THREE NAUTICAL MILE LINE (see note V)

NORTHERN TRAFFIC SEPARATION ZONE

NORTHERN TRAFFIC

SEPARATION ZONE

Joins page 9

Joins page 6

This BookletChart was reduced to 75% of the original chart scale. The new scale is 1:133333. Barscales have also been reduced and are accurate when used to measure distances in this BookletChart.

5

Joins page 5

Joins page 10²⁷

Printed at reduced scale.

~~SCALE 1:100,000~~

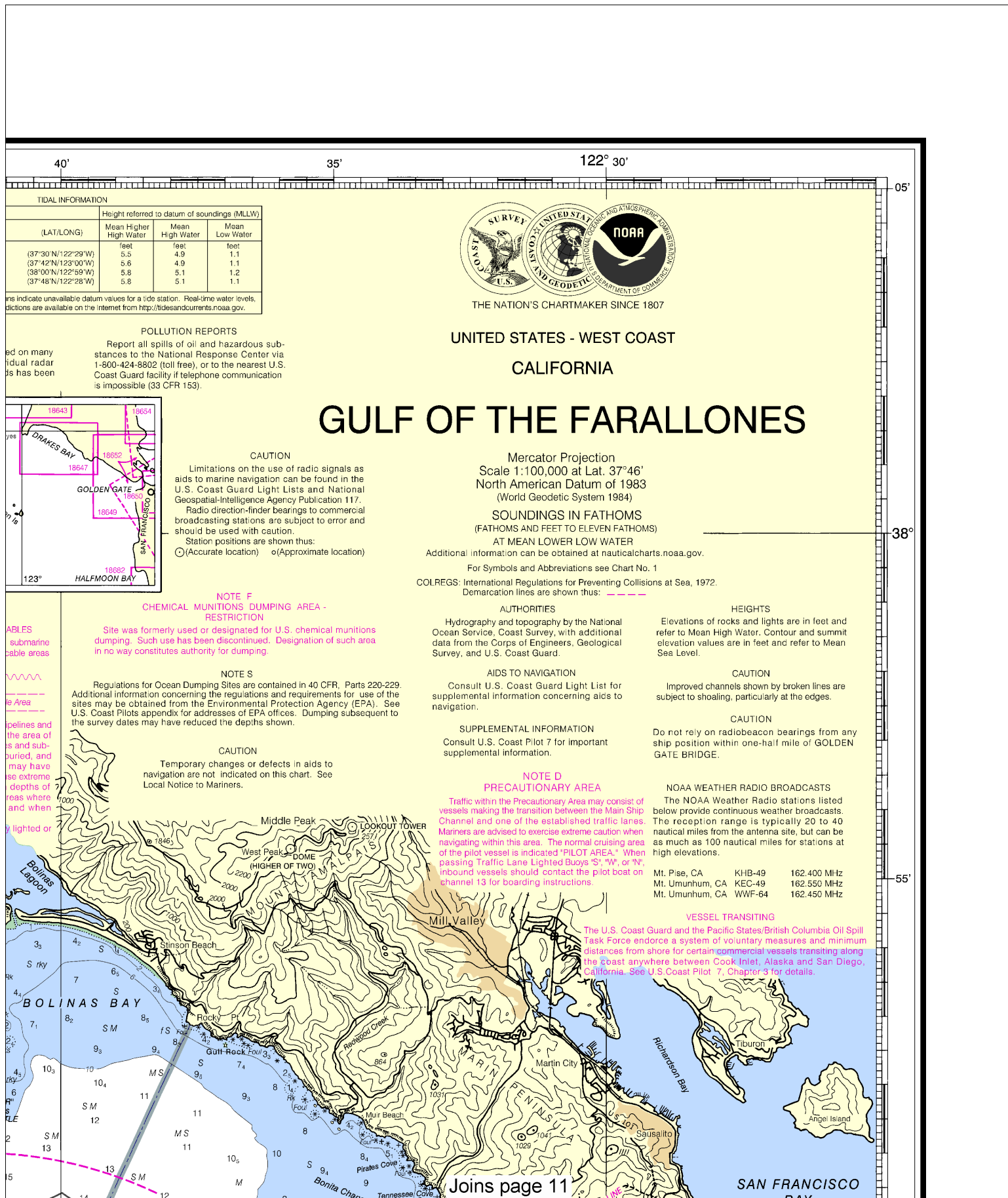
See Note on page 5.

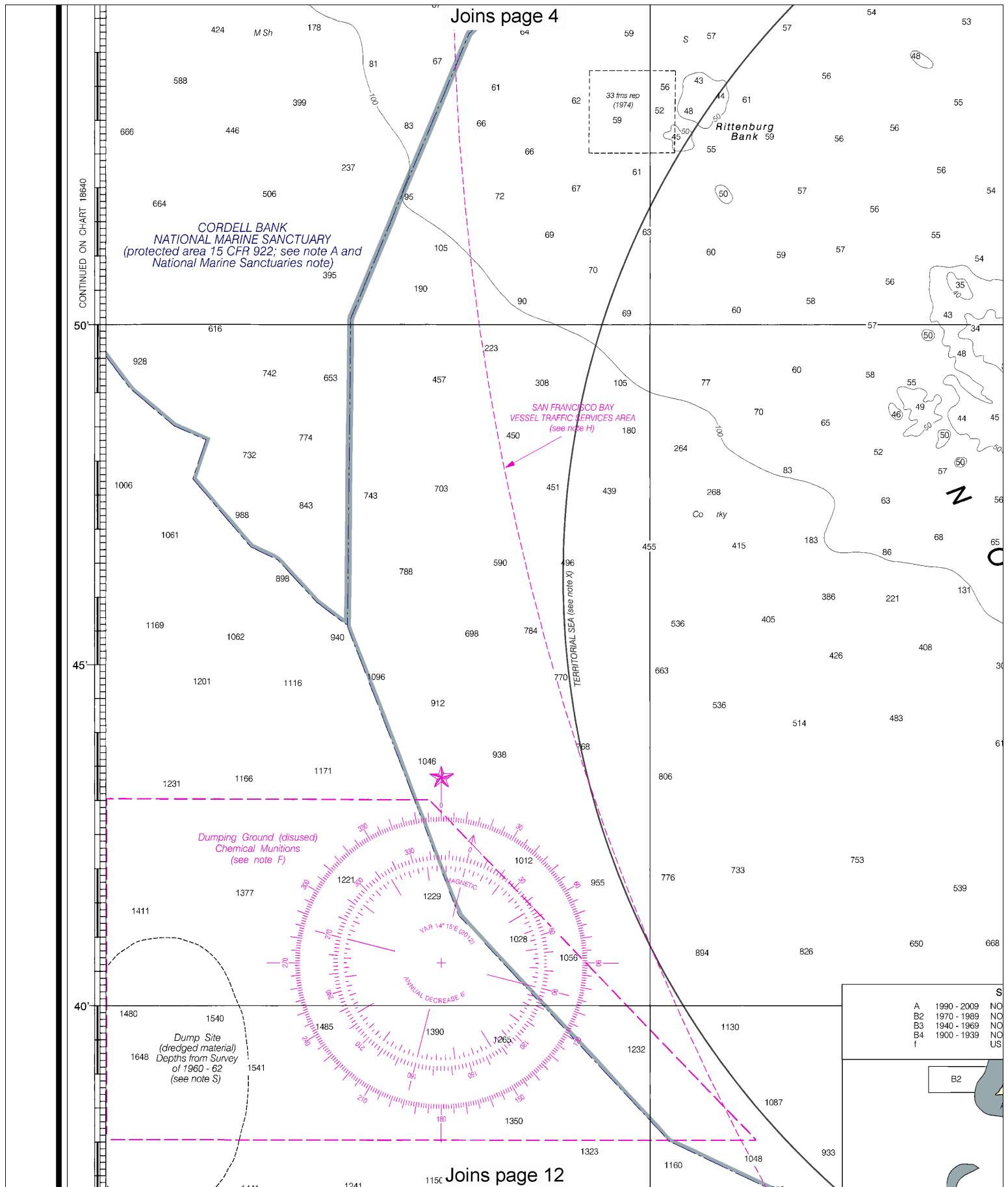
Note: Chart grid lines are aligned with true north.

Nautical Miles

4
Yards

5 6 7





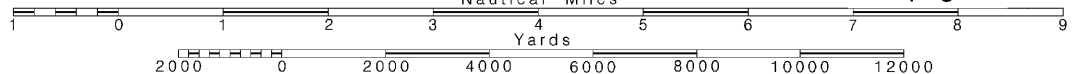
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Note: Chart grid lines are aligned with true north.

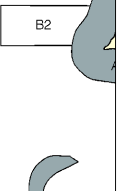
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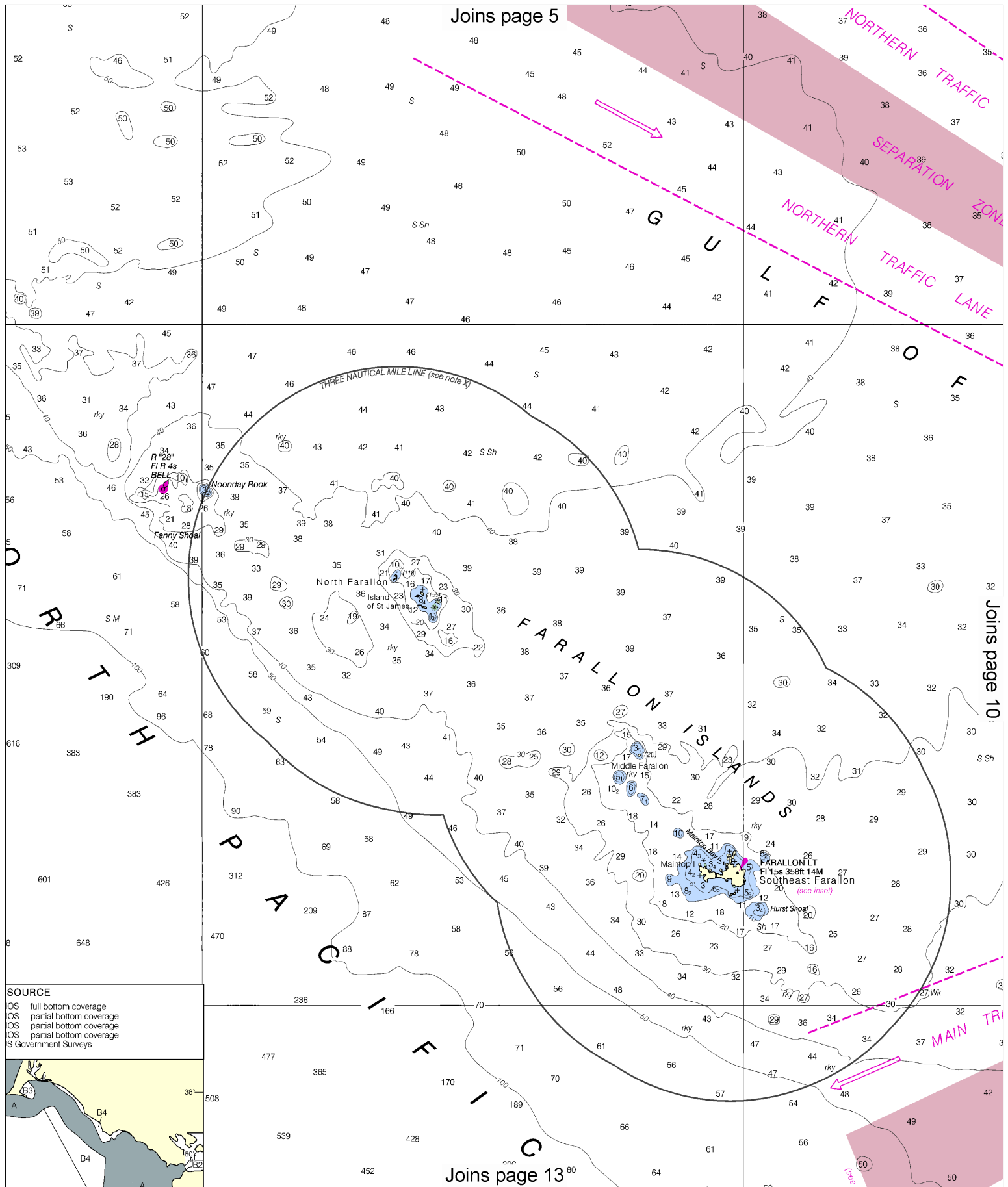
SCALE 1:100,000
Nautical Miles

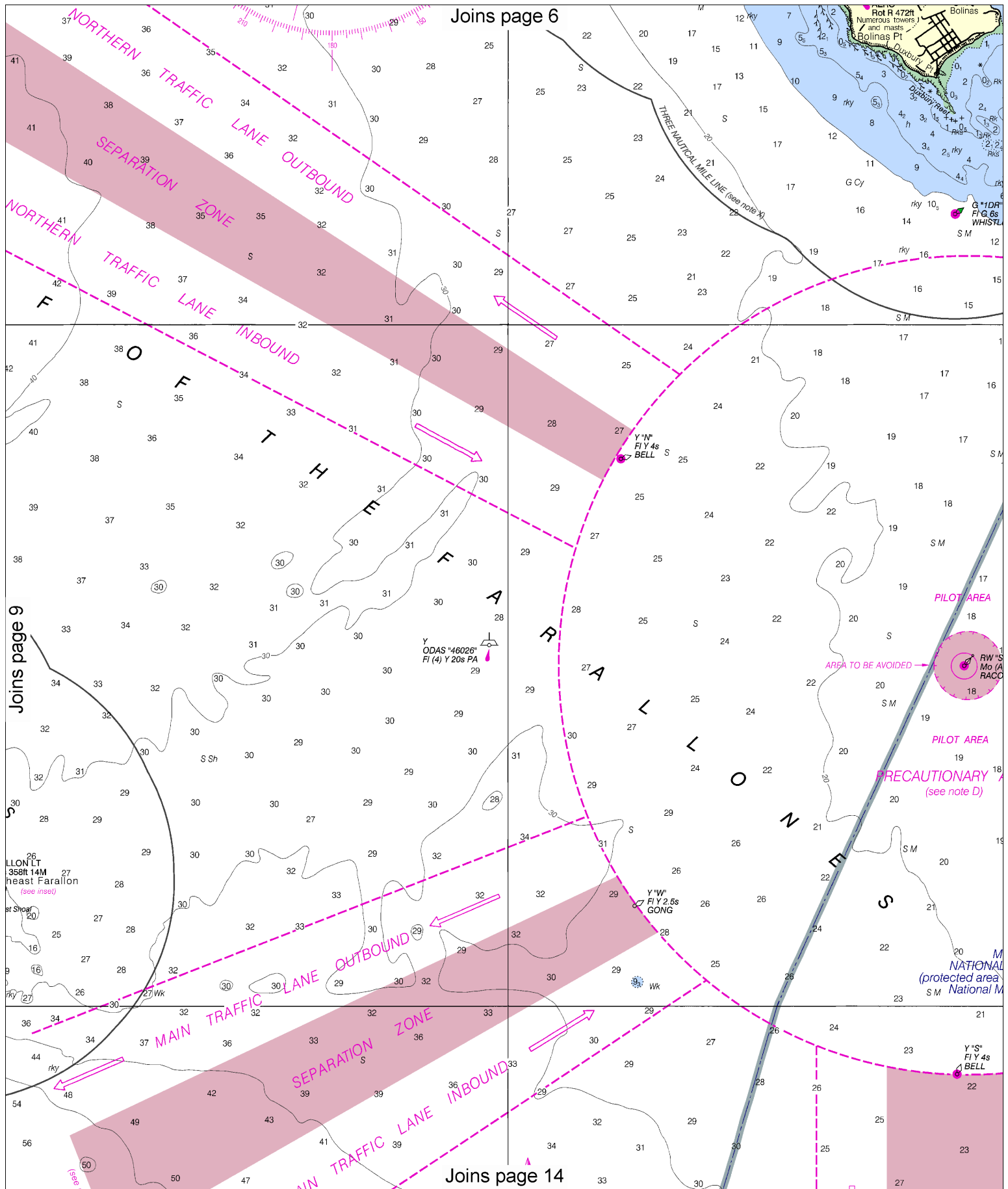
See Note on page 5.



A	1990 - 2009	NO
B2	1970 - 1989	NO
B3	1940 - 1969	NO
B4	1900 - 1939	NO
f		US

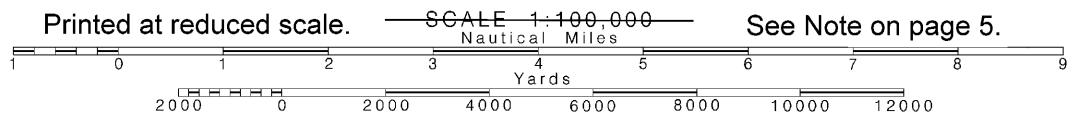


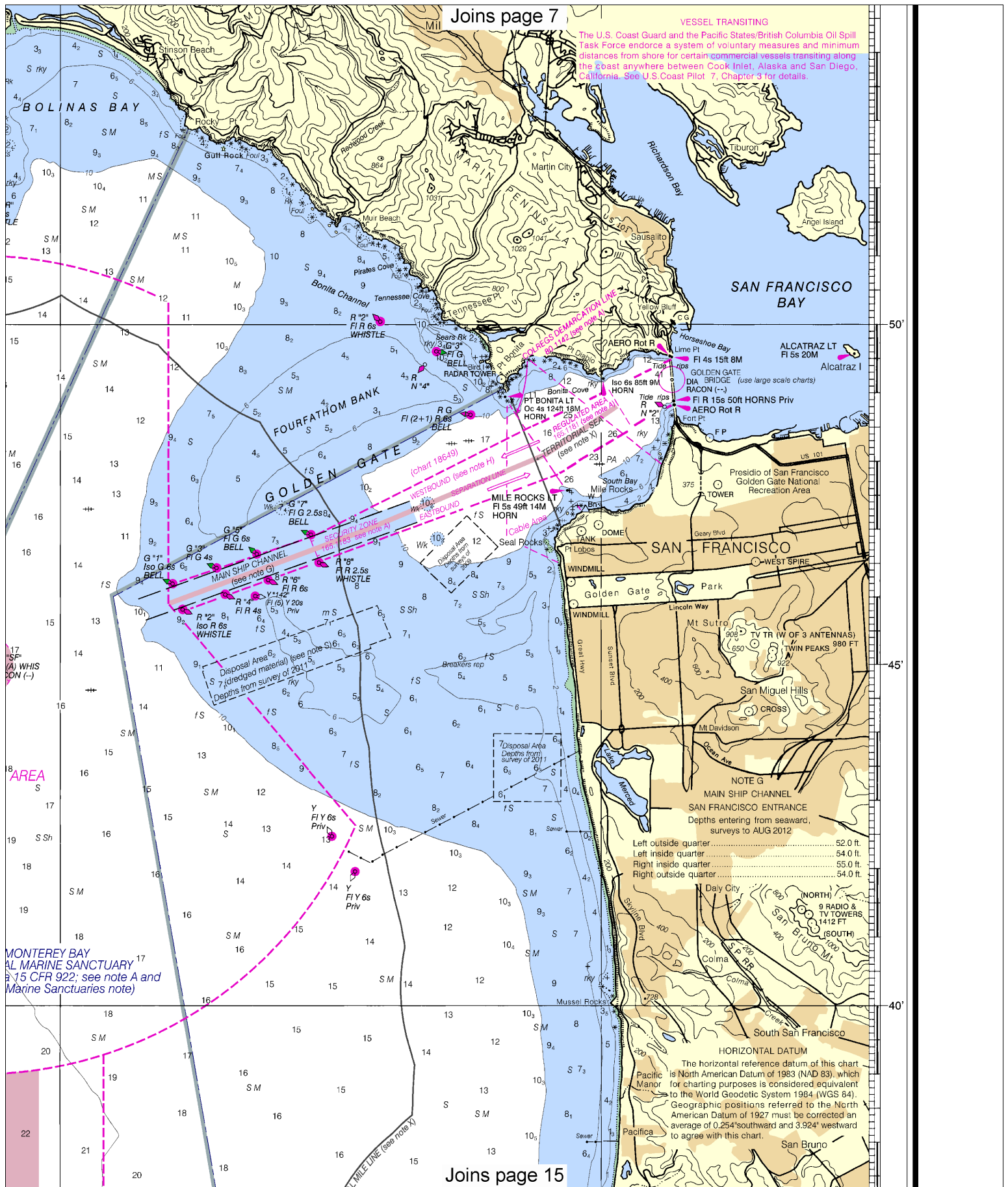




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Note: Chart grid lines are aligned with true north.





Joins page 8

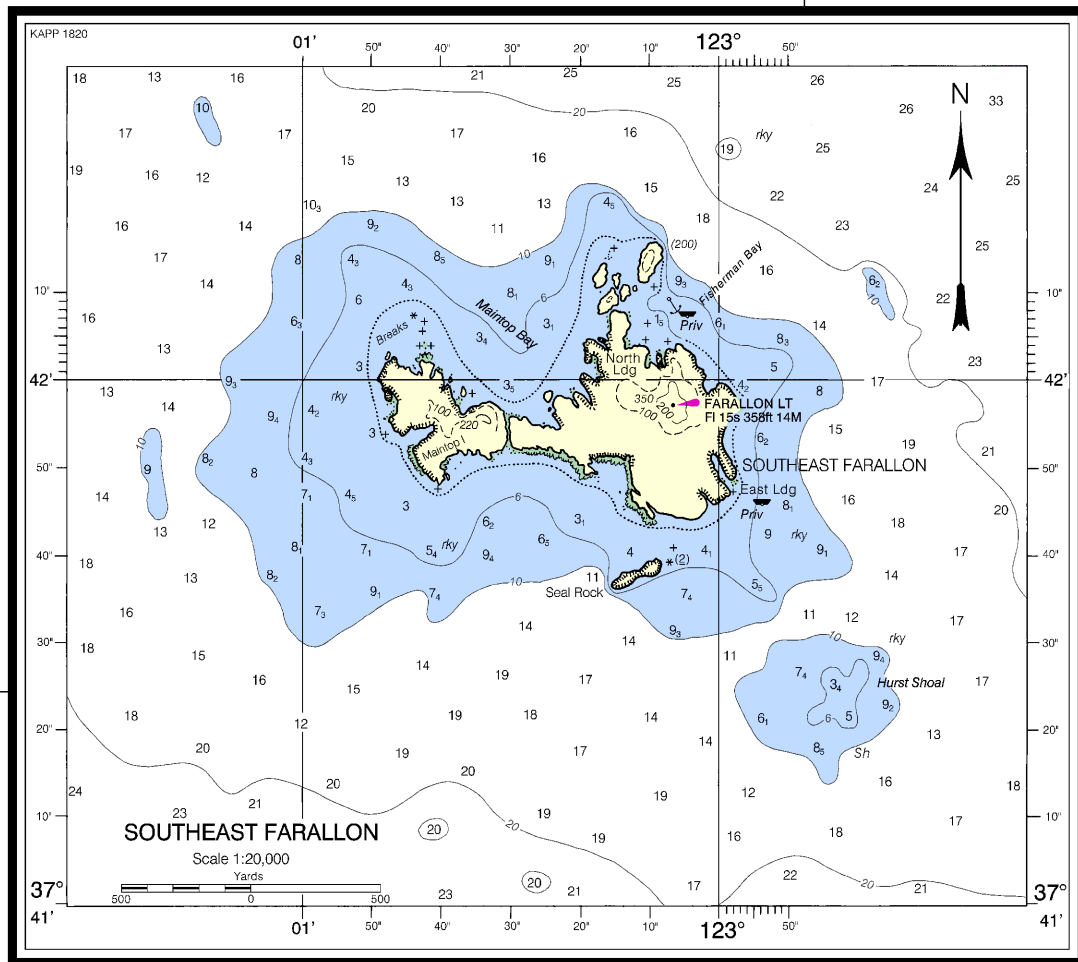
650 668

A 1990 - 2009 NO
B2 1970 - 1989 NO
B3 1940 - 1969 NO
B4 1900 - 1939 NO
1 NO US

B2

B3

The outlined areas represent survey information that has been banded in this diagram by the U.S. Army Corps of Engineers. Areas not shown on this diagram.



27th Ed., Mar. / 12 ■ Corrected through NM Mar. 31/12
Corrected through LNM Mar. 27/12

18645

CAUTION

This chart has been corrected from the Notice to Mariners (NM) published weekly by the National Geospatial-Intelligence Agency and the Local Notice to Mariners (LNM) issued periodically by each U.S. Coast Guard district to the dates shown in the lower left hand corner. Chart updates corrected from Notice to Mariners published after the dates shown in the lower left hand corner are available at nauticalcharts.noaa.gov.

This nautical chart has been designed to promote safe navigation. The U.S. Coast Guard encourages users to submit corrections, adding to the chart to the Chief, Marine Chart Division (N) Service, NOAA, Silver Spring, Maryland 20910-3282.

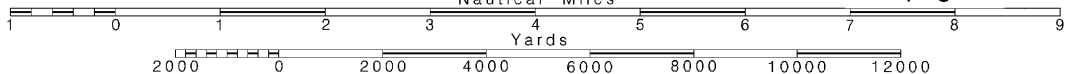
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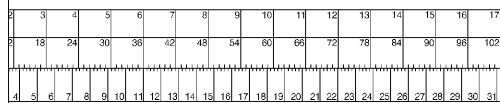
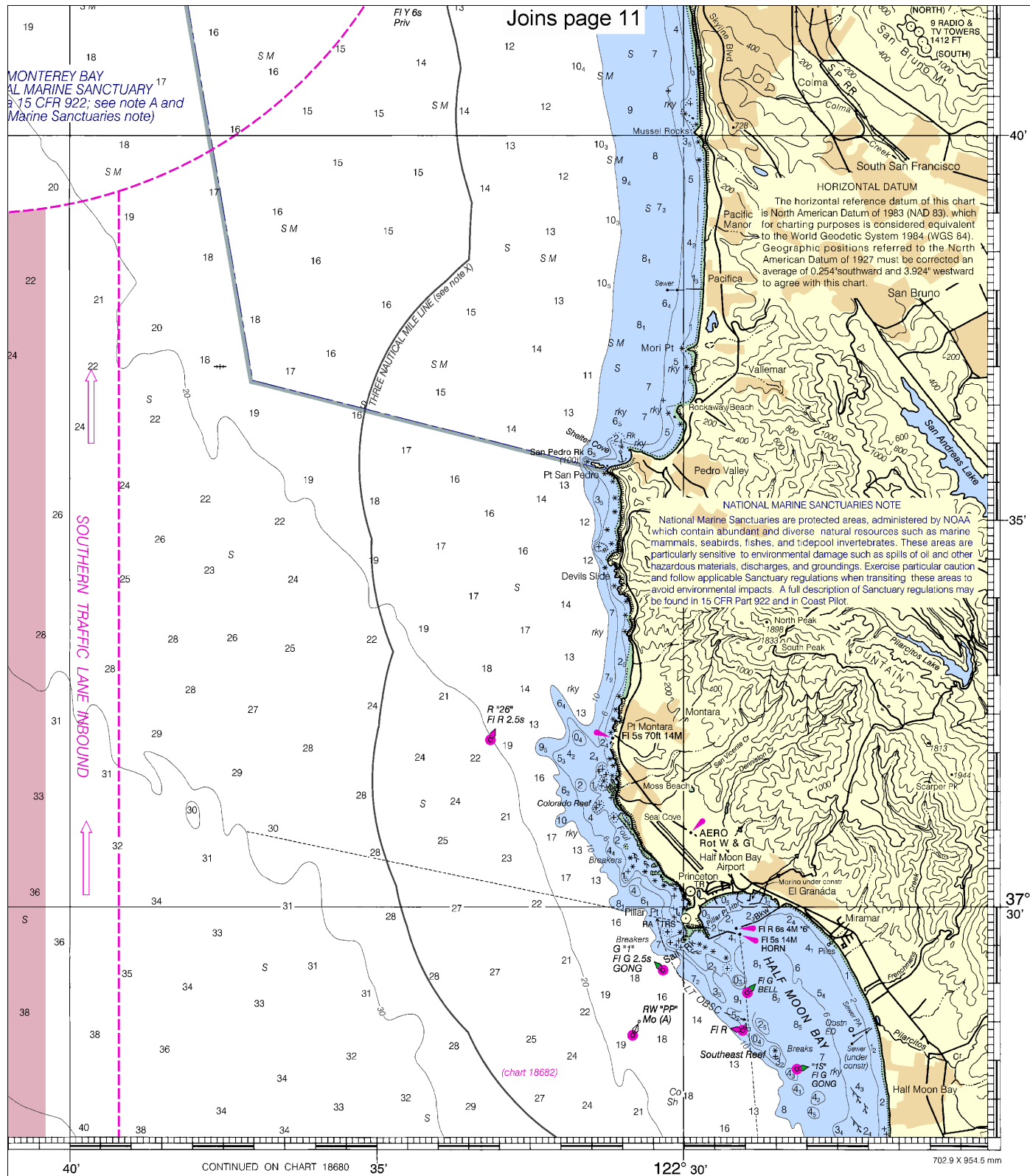
Note: Chart grid lines are aligned with true north.

Printed at reduced scale.

SCALE 1:100,000
Nautical Miles

See Note on page 5.





Gulf of the Farallones
SOUNDINGS IN FATHOMS - SCALE 1:100,000

18645

ED. NO. 27

NSN 7642014011504
NGA REFERENCE NO. 18ACO18645

15



VHF Marine Radio channels for use on the waterways:

Channel 6 – Inter-ship safety communications.

Channel 9 – Communications between boats and ship-to-coast.

Channel 13 – Navigation purposes at bridges, locks, and harbors.

Channel 16 – Emergency, distress and safety calls to Coast Guard and others, and to initiate calls to other

vessels. Contact the other vessel, agree to another channel, and then switch.

Channel 22A – Calls between the Coast Guard and the public. Severe weather warnings, hazards to navigation and safety warnings are broadcast here.

Channels 68, 69, 71, 72 and 78A – Recreational boat channels.

Getting and Giving Help — Signal other boaters using visual distress signals (flares, orange flag, lights, arm signals); whistles; horns; and on your VHF radio. You are required by law to help boaters in trouble. Respond to distress signals, but do not endanger yourself.

Distress Call Procedures

- Make sure radio is on.
- Select Channel 16.
- Press/Hold the transmit button.
- Clearly say: "MAYDAY, MAYDAY, MAYDAY."
- Also give: Vessel Name and/or Description; Position and/or Location; Nature of Emergency; Number of People on Board.
- Release transmit button.
- Wait for 10 seconds — If no response Repeat MAYDAY call.

HAVE ALL PERSONS PUT ON LIFE JACKETS!



NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service office. NWR broadcasts official Weather Service warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week.

<http://www.nws.noaa.gov/nwr/>

Quick References

Nautical chart related products and information	—	http://www.nauticalcharts.noaa.gov
Online chart viewer	—	http://www.nauticalcharts.noaa.gov/mcd/NOAAChartViewer.html
Report a chart discrepancy	—	http://ocsddata.ncd.noaa.gov/idrs/discrepancy.aspx
Chart and chart related inquiries and comments	—	http://ocsddata.ncd.noaa.gov/idrs/inquiry.aspx?frompage=ContactUs
Chart updates (LNM and NM corrections)	—	http://www.nauticalcharts.noaa.gov/mcd/updates/LNM_NM.html
Coast Pilot online	—	http://www.nauticalcharts.noaa.gov/nsd/cpdownload.htm
Tides and Currents	—	http://tidesandcurrents.noaa.gov
Marine Forecasts	—	http://www.nws.noaa.gov/om/marine/home.htm
National Data Buoy Center	—	http://www.ndbc.noaa.gov/
NowCoast web portal for coastal conditions	—	http://www.nowcoast.noaa.gov/
National Weather Service	—	http://www.weather.gov/
National Hurricane Center	—	http://www.nhc.noaa.gov/
Pacific Tsunami Warning Center	—	http://ptwc.weather.gov/
Contact Us	—	http://www.nauticalcharts.noaa.gov/staff/contact.htm



— For the latest news from Coast Survey, follow @nauticalcharts



This Booklet chart has been designed for duplex printing (printed on front and back of one sheet). If a duplex option is not available on your printer, you may print each sheet and arrange them back-to-back to allow for the proper layout when viewing.

NOAA's Office of Coast Survey



The Nation's Chartmaker